

15. Diagnoses of New Species and Varieties of Agnathous Mollusca from Equatorial Africa. By H. B. PRESTON, F.Z.S.

[Received November 8, 1912: Read February 18, 1913.]

(Plates XXXII.-XXXV.\*)

INDEX.		Page
Geographical .....		194
Systematic:		
<i>Streptaxis</i> : 5 new species .....		194-195
<i>Ennea</i> : 53 new species; 11 new varieties ...		196-216
<i>Ennea syngenes</i> , nom. nov. for <i>E. consobrina</i> ...		216

The species of which descriptions are given in the present paper were chiefly collected in East and East Central Africa by Messrs. Robin Kemp, A. Blayney Percival, and C. W. Woodhouse in their recent travels in those parts of the African continent, and, further, go to show the enormous field for conchological research awaiting the student of this very fruitful region, in many parts of which it would appear that, probably owing to variation in rainfall, altitude, etc., each range of hills has to a certain extent its own special molluscan fauna, often characterised by certain local and peculiar phases not only common to the species but also to the genera occurring in that particular locality.

*STREPTAXIS PERCIVALI*, sp. n. (Pl. XXXII. fig. 4.)

Shell ovate, somewhat inflated, thin, semitransparent, yellowish white; whorls 5, the earlier whorls regularly increasing, the later proportionately large, the last two distorted, sculptured with fine, very oblique, and closely set costulæ which become obsolete on the base of the shell; suture impressed, narrowly margined below; umbilicus moderately narrow, deep; columella outwardly expanded, descending in a strong curve, diffused above into a thin, ill-defined, projecting callus which reaches the upper margin of the labrum; labrum white, narrowly expanded and reflexed; aperture somewhat oblique, roundly ovate.

Alt. 9·25, diam. maj. 7, diam. min. 6 mm.

Aperture: alt. 4, diam. 3·5 mm.

*Hab.* Northern slopes of Mt. Marsabit, British East Africa (*A. Blayney Percival*).

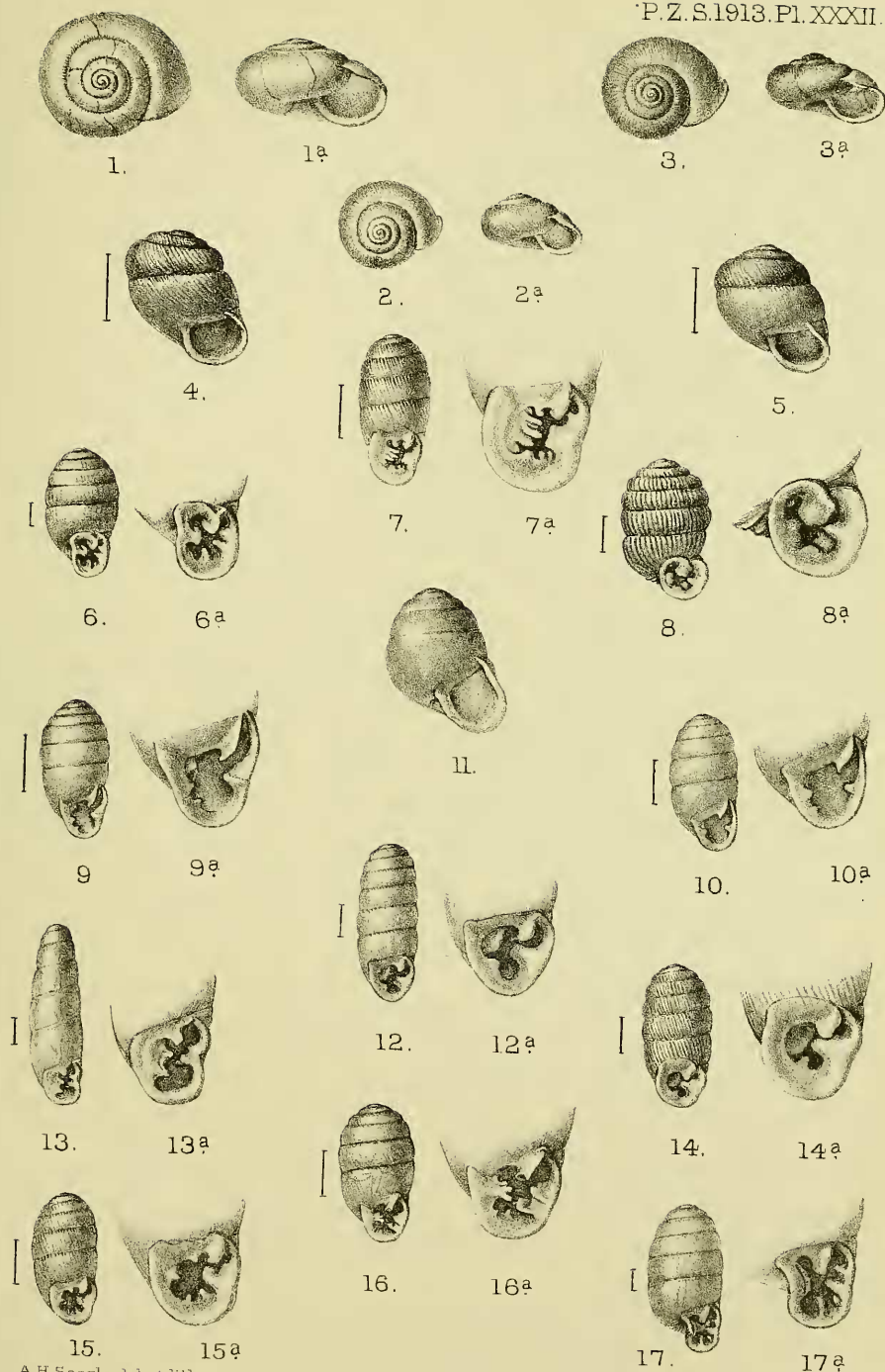
Allied to *S. kirkii* Dohrn †, but differing chiefly in having one whorl less.

*STREPTAXIS WOODHOUSEI*, sp. n. (Pl. XXXII. fig. 5.)

Shell differing from *S. percivali*, to which it is nearly allied, in its more rectangular and less inflated form, more obtuse apex,

\* For explanation of the Plates see p. 217.

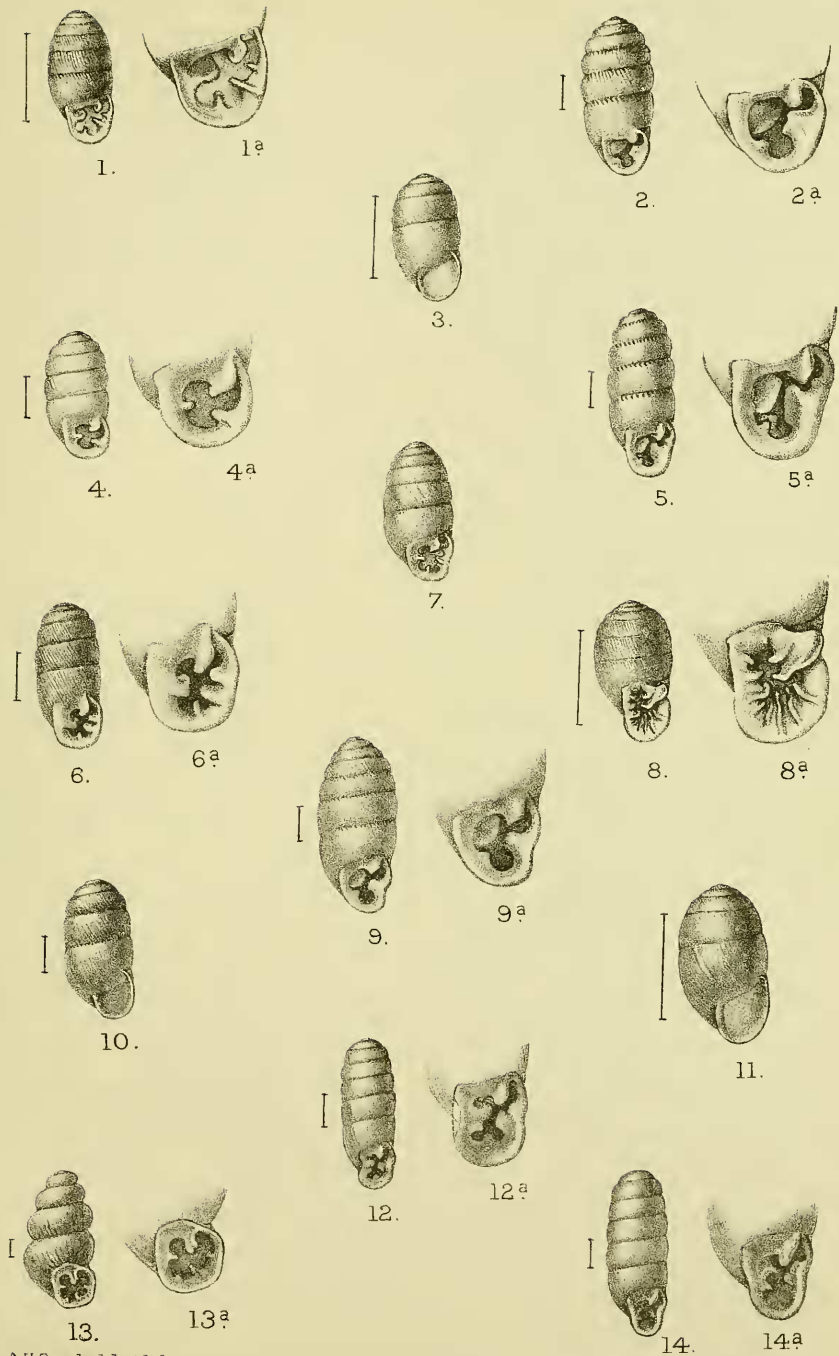
† Proc. Zool. Soc. Lond. 1865, p. 232.



A.H. Searle del. et lith.

Huth imp.





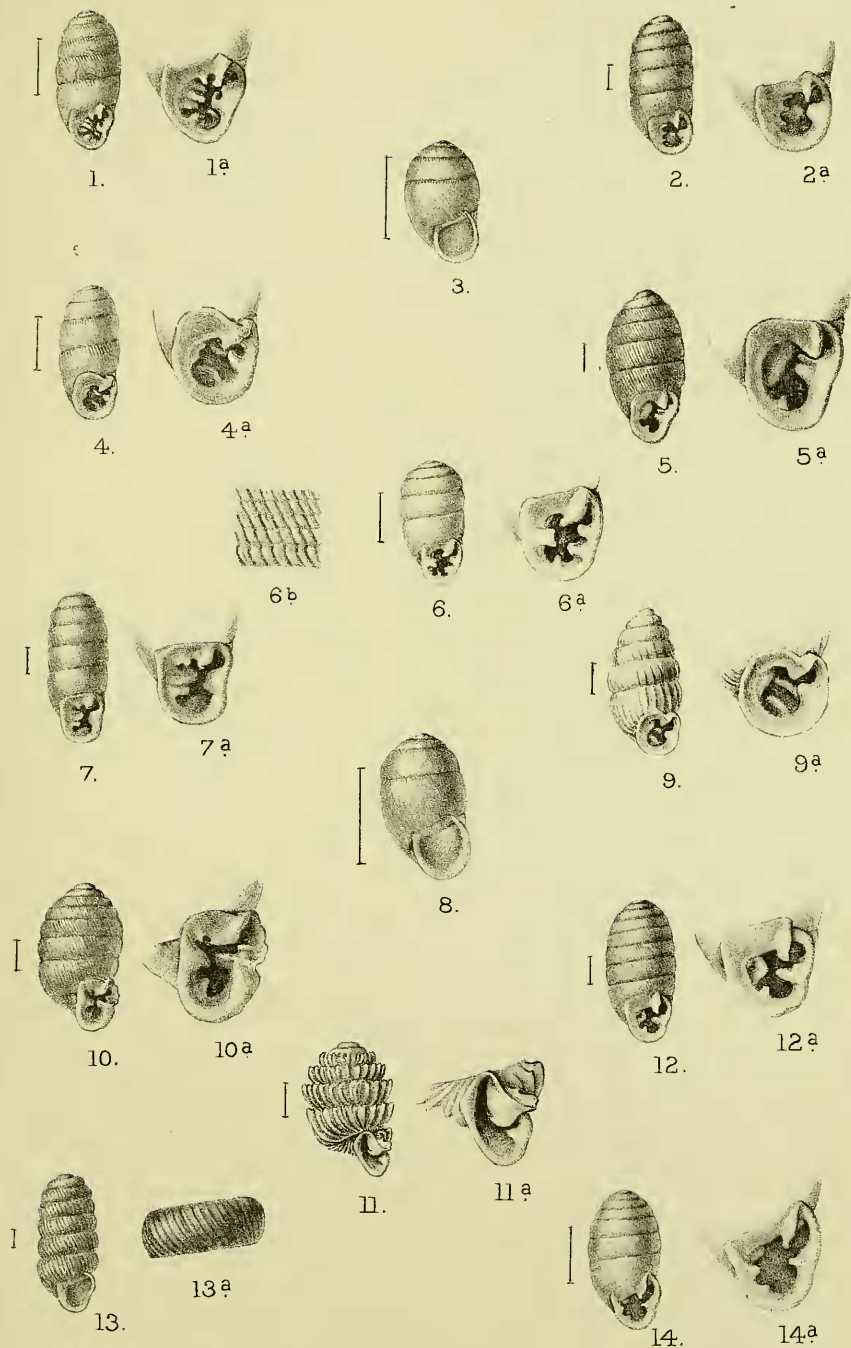
A.H.Searle del. et lith.

Huth, imp.

NEW ENNEA FROM EQUATORIAL AFRICA.



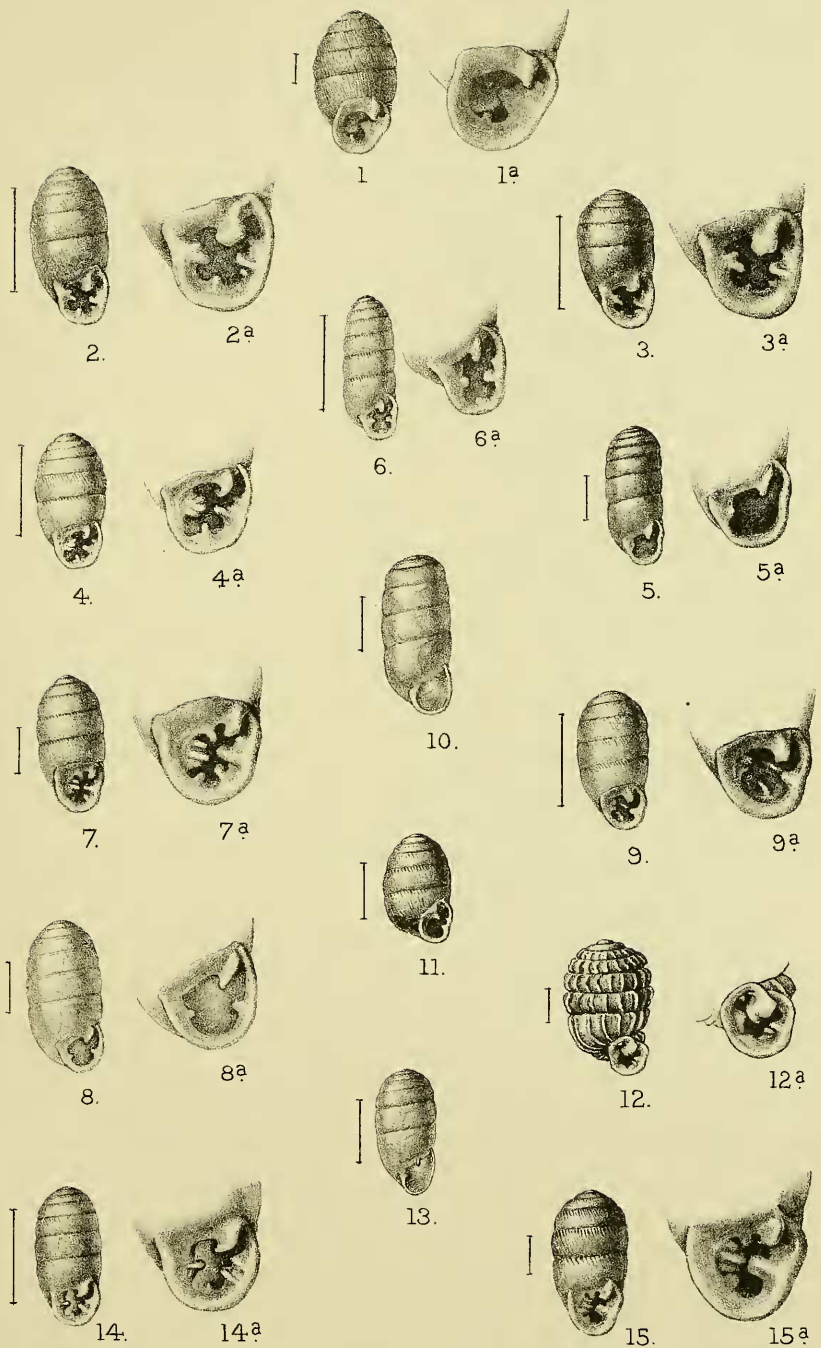




A.H. Searle, del et lith.

Huth, imp.





A.H. Searle, del et lith.

Huth, imp.



and rather coarser transverse sculpture; the umbilicus is narrower and the columella descends almost vertically in a very slight curve and extends above into a thickish, well-defined, parietal callus; the aperture is also much more rectangular than in that species.

Alt. 9.5, diam. maj. 7, diam. min. 5.75 mm.

Aperture: alt. 3.75, diam. 3 mm.

*Hab.* Mt. Elgon, Uganda (*C. W. Woodhouse*).

*STREPTAXIS MARSABITENSIS*, sp. n. (Pl. XXXII. figs. 2, 2 a.)

Shell very depressedly turbinate, cream-coloured; whorls  $4\frac{1}{2}$ , regularly increasing, the earlier whorls smooth, polished, shining, the later whorls sculptured with moderately fine, closely set, arcuate riblets which become obsolete on the base of the shell; suture impressed; umbilicus wide, deep; columella descending in an oblique curve, white, slightly expanded, outwardly extending above into a somewhat thick, well-defined, polished, parietal callus which reaches the upper margin of the labrum; labrum white, considerably expanded and reflexed below, slightly so above, where it is gibbously bent somewhat downwards in front, thus forming, with the parietal wall, a broad, but very shallow, sinus; aperture obliquely and broadly subulate.

Alt. 7, diam. maj. 13.75, diam. min. 11.25 mm.

Aperture: alt. 5, diam. 4.5 mm.

*Hab.* Northern slopes of Mt. Marsabit, British East Africa, at an altitude of 4600 feet (*A. Blayney Percival*).

*STREPTAXIS URGUESSENSIS*, sp. n. (Pl. XXXII. figs. 3, 3 a.)

Shell allied to *S. marsabitensis*, but differing from that species in its larger size, broader, but proportionately no higher, form, and rather coarser transverse sculpture above, though the basal sculpture, while being much more marked, is considerably finer; the umbilicus is proportionately slightly narrower and the columella more obliquely descending; the labrum has converging margins and is more sinuous and gibbously bent downwards over the aperture, which is subrectangular and much broader in shape than is the case with *S. marsabitensis*.

Alt. 9.5, diam. maj. 16, diam. min. 13 mm.

Aperture: alt. 7, diam. 5.5 mm.

*Hab.* Urguess, British East Africa (*A. Blayney Percival*).

*STREPTAXIS DESIDERATA*, sp. n. (Pl. XXXII. figs. 1, 1 a.)

Shell suborbicular, very depressedly turbinate, polished, shining, cream-coloured; whorls  $5\frac{1}{4}$ , regularly increasing, the last somewhat rapidly broadening towards the aperture, marked only with indistinct, transverse growth-ridges; suture impressed, rather coarsely crenellate; umbilicus open, broad, deep; columella descending in an oblique curve above, very oblique below, reflexed, whitish, diffused into a thin, fairly well-defined, and broadly, outwardly extending, parietal callus which reaches the upper



margin of the labrum; labrum thickened, expanded, reflexed and considerably receding below, then scarcely reflexed, projecting and somewhat inwardly bent over the aperture and finally again receding above; aperture very broadly and compressedly, obliquely subulate.

Alt. 11, diam. maj. 20, diam. min. 16 mm.

Aperture: alt. 8.5, diam. 8.25 mm.

*Hab.* Urguess, British East Africa (*A. Blayney Percival*).

ENNEA BUCCINA, sp. n. (Pl. XXXII. fig. 11.)

Shell rather large, edentulate, somewhat ovately trigonal, white; whorls  $6\frac{1}{2}$ , the first five rather rapidly, but regularly increasing, the last very large, rapidly ascending in front, slightly diverging from the axis of the remainder, indistinctly, transversely, arcuately plicate, the plicæ becoming obsolete on the last whorl which is nearly smooth; suture lightly impressed; umbilicus appearing as a very narrow, shallow, curved, elongate depression; columella descending in a slightly oblique curve, diffused above into a thin, opaque, rather ill-defined, parietal callus which terminates just in front of the upper margin of the labrum; labrum white, porcellanous, outwardly expanded and very narrowly reflexed except near its upper margin where, though thickened, this is scarcely the case, projecting in front, receding below and slightly above to form a shallow curved sinus; aperture very oblique, subrectangular, with rounded base.

Alt. 20.25, diam. maj. 15.5, diam. min. 12.75 mm.

Aperture: alt. (nearly) 9.5, diam. 5.75 mm.

*Hab.* Burunga, Mount Mikenno, Belgian Congo, at an altitude of 6000 feet (*Robin Kemp*).

ENNEA MARGARITA, sp. n. (Pl. XXXIV. fig. 8.)

Shell ovate, polished, shining, whitish cream-colour; whorls 6, rapidly increasing, the penultimate gibbous, the last slightly oblique, the earlier whorls sculptured with transverse riblets which become obsolete on the later whorls except at the suture, the last whorl marked with very fine, almost imperceptible, scratch-like, spiral striæ; suture impressed, margined below, the margin rather coarsely sculptured by the terminations of the transverse riblets; umbilicus (in the adult) quite closed, the umbilical area being represented by a shallow depression; columella slightly excavated above, obliquely descending below; labrum pure white, expanded and narrowly reflexed, the margins joined by a thin, well-defined, parietal callus; aperture subquadrate, edentulate.

Alt. 12.5, diam. maj. 7.5 mm.

Aperture: alt. 5, diam. 3.25 mm.

*Hab.* Kigezi, extreme S.W. Uganda, at an altitude of 6000 feet (*Robin Kemp*).

Young specimens are somewhat narrowly, but profoundly, umbilicate.

*ENNEA KIVUENSIS*, sp. n. (Pl. XXXIV. fig. 3.)

Shell differing from *E. margarita* in its smaller size, rather more cylindrical form, and generally thinner texture; the transverse sculpture is more marked, the penultimate whorl is proportionately less gibbous, and the last whorl is comparatively broader than is the case in that species.

Alt. 10·5, diam. maj. 6·25 mm.

Aperture: alt. 4·25, diam. 3 mm.

*Hab.* Near Lake Kivu, Belgian Congo (*Robin Kemp*).

*ENNEA INNOCENS*, sp. n. (Pl. XXXIII. fig. 11.)

Shell scarcely rimate, rather large, cylindrically ovate, cream-coloured, smooth, shining; whorls 6, rather flat, the first three regularly, the remainder rapidly, increasing in size, the last very slightly ascending in front; suture impressed; columella vertically descending, slightly bulging in the middle, narrowly outwardly expanded; labrum white, very narrowly reflexed and dilated below; aperture irregularly subquadrate, edentulate.

Alt. 13·75, diam. maj. 7·5 mm.

Aperture: alt. 5·25, diam. 3·25 mm.

*Hab.* Jombene Hills, British East Africa, at an altitude of 6000 feet (*Robin Kemp*).

*ENNEA ELGONENSIS*, sp. n. (Pl. XXXIII. fig. 3.)

Shell allied to *E. innocens*, but much smaller and with more obtuse apex, though having the same number of whorls; the umbilical depression is proportionately broader, the columella descends in a curve, the labrum is not dilated below, and the aperture is ovate instead of being subquadrate as in *E. innocens*.

Alt. 10·75, diam. maj. 5·75 mm.

Aperture: alt. 4, diam. 2·75 mm.

*Hab.* Mt. Elgon, Uganda (*C. W. Woodhouse*).

*ENNEA INGLORIA*, sp. n. (Pl. XXXIII. fig. 10.)

Shell small, shortly cylindrical, thin, whitish; whorls 6, the first four regularly increasing, the fifth and sixth rather rapidly increasing in length, but not in breadth, smooth but for coarse growth-markings, the last two whorls convex; suture impressed, strongly crenellate below; perforation very narrow; columella slightly oblique and outwardly expanded; labrum narrowly dilated below and reflexed; aperture edentulate, subovate.

Alt. 4·5, diam. maj. 2·25 mm.

Aperture: alt. 1, diam. ·5 mm.

*Hab.* Mt. Nyiro, to the south of Lake Rudolph, at an altitude of 8300 feet (*A. Blayney Percival*).

*ENNEA RECTANGULARIS*, sp. n. (Pl. XXXV. fig. 10.)

Shell rectangularly cylindrical, with planulate apex, thin, transparent, polished, shining, vitreous, pale greenish; whorls 6, the first two flattened above, the third increasing in length and

breadth, the fourth also increasing in length, but slightly diminishing in breadth, the fifth increasing in length and again in breadth to equal that of the third, the sixth increasing in length but not in breadth; suture impressed, narrowly margined below; columella rather obliquely descending, white, porcellaneous; labrum white, narrowly, outwardly expanded and reflexed except near the upper margin, where it becomes almost acute; aperture subquadrate, edentulate.

Alt. 6·75, diam. maj. 3 mm.

Aperture: alt. 1·5, diam. 1 mm.

*Hab.* Urguess, British East Africa (*A. Blayney Percival*).

ENNEA BACCATA, sp. n. (Pl. XXXII. figs. 10, 10 a.)

Shell cylindrically ovate, cream-coloured; whorls 8, the first very small, the second large in proportion, the third, fourth, fifth, and sixth regularly increasing in length and breadth, the seventh increasing in length, but not in breadth, the eighth increasing in length, but diminishing in breadth, sculptured, especially on the upper whorls, with fine, slightly oblique, closely set, transverse striæ; suture lightly impressed; umbilical area presenting a narrow depression; columella not very obliquely descending, spreading above into a very thin, almost imperceptible, but well-defined, parietal callus which reaches to the upper margin of the labrum; labrum sinuous, outwardly expanded, especially at the base, reflexed; aperture armed with an erect, oblique, parietal lamella situated very near the upper margin of the labrum, a rather coarse lamella-like projection on the outer lip, a small nodulous basal denticle at the foot of the columella, above which, and rather more exteriorly situate, occurs another and stronger nodulous denticle, and above this again a rather broad, very interiorly situate, columellar projection.

Alt. 6, diam. maj. 3 mm.

Aperture: alt. 1·25, diam. ·75 mm.

*Hab.* Urguess, British East Africa, at an altitude of 6000 feet (*A. Blayney Percival*).

ENNEA ARTHURI, sp. n. (Pl. XXXII. figs. 9, 9 a.)

Allied to *E. baccata*, but much smaller, with more obtuse apex; it has one whorl less, the first four increasing regularly, the fifth proportionately in length, but not in breadth, while the sixth and seventh increase also in length, but diminish in breadth; the surface is quite smooth, polished and shining, without any trace of the transverse striæ which are characteristic of *E. baccata*; the suture is *narrowly margined above*, the labrum is *not* sinuous, the columella is much more oblique and *lacks the internal projection* on the upper part which is so well developed in that species.

Alt. 7·25, diam. maj. 3·75 mm.

Aperture: alt. 3, diam. 1·5 mm.

*Hab.* Jombene Hills, British East Africa, at an altitude of 4000 feet (*A. Blayney Percival*).

ENNEA ADELPHA, sp. n. (Pl. XXXII. figs. 7, 7*a*; Pl. XXXIV. figs. 1, 1*a*.)

Shell allied to *E. vicina* Smith\* from Chiradzulu, British Central Africa, but differing from that species chiefly in its coarsely crenellate suture and coarse, transverse, plicate sculpture; the small parietal denticle of *E. vicina* is also much more developed and the broad, tridentate projection on the inner margin of the outer lip less so.

Alt. 6·5, diam. maj. 3·25 mm.

Aperture: alt. 2·25, diam. 1·75 mm.

*Hab.* Between Masaka and Entebbe, extreme S.W. Uganda (*Robin Kemp*).

The very distant locality of *E. vicina*, which is situated to the south of Lake Nyassa, has to a certain extent influenced me in separating the present species.

ENNEA PERTURBATA, sp. n. (Pl. XXXV. figs. 7, 7*a*.)

Shell allied to *E. adelpha* and in a measure to *E. vicina* Smith, but shorter and with less convex whorls than either, besides lacking the two internal basal denticies which seem to be a character common to both those species.

Alt. 6, diam. maj. 3 mm.

Aperture: alt. 1·75, diam. 1 mm.

*Hab.* Mt. Elgon, Uganda (*C. W. Woodhouse*).

ENNEA COENI, sp. n. (Pl. XXXII. figs. 15, 15*a*.)

Shell differing from *E. perturbata* and its allies *E. vicina* Smith and *E. adelpha* in lacking the group of three closely situated and projecting lamellæ on the upper part of the columella, which, in the present species, are replaced by a single, small, and slightly curved denticle.

Alt. 5·75, diam. maj. 2·75 mm.

Aperture: alt. 1·5, diam. ·75 mm.

*Hab.* Mt. Elgon, Uganda (*C. W. Woodhouse*).

ENNEA WOODHOUSEI, sp. n. (Pl. XXXV. figs. 15, 15*a*.)

Shell allied to *E. perturbata*, but considerably smaller, with rather coarser and more distant transverse plicæ and more basally constricted aperture; the tridentate projection on the inner side of the outer lip, which is common, not only to the above species, but also to *E. vicina* Smith, and to *E. adelpha*, in the present case appears as a very broad, *bidentate*, shelf-like protuberance, almost choking the aperture.

Alt. 4·75, diam. 2·5 mm.

Aperture: alt. 1, diam. ·75 mm.

*Hab.* Mt. Elgon, Uganda (*C. W. Woodhouse*).

ENNEA NYIKAENSIS, sp. n.

Shell differing from *E. fortidentata* Smith† in its larger and

\* Proc. Zool. Soc. Lond. 1899, pp. 580-581, pl. xxxiii. figs. 1, 2.

† Ann. & Mag. Nat. Hist. 1890, vi. p. 162, pl. vi. fig. 6.

much broader form, the crenulation at the suture is also considerably finer, and it also lacks the small parietal denticle of that species.

Alt. 9.25, diam. maj. 6.25 mm.

Aperture: alt. 4, diam. 3.25 mm.

*Hab.* Nyika Range, Nyassaland.

*Ennea fortidentata* was described by Mr. E. A. Smith, in the year 1890, from specimens collected by Mr. Last at Mamboia, German East Africa, and in 1897 a number of specimens of an *Ennea* were received at the British Museum from Sir H. H. Johnston which had been collected far to the south on the Nyika Range in Nyassaland\*. As the dentition appeared to be nearly identical these specimens were considered to be a variety of *E. fortidentata* and have been regarded as such until the present time. Through the courtesy of Mr. Smith I have now been able to examine both the type specimens of *E. fortidentata* and also the series of shells from Nyassaland, besides, through the kindness of Mr. A. Blayne Percival, a vast number of fairly typical specimens of that species from Mt. Elgon in Uganda, with the result that I am forced to the conclusion that the Nyassaland shells are quite distinct from those collected at Mamboia and more recently on Mt. Elgon.

The type of *E. nyikaensis* is in the British Museum.

ENNEA CAREA, sp. n. (Pl. XXXII. figs. 13, 13 a.)

Shell small, cylindrical, white, smooth, polished, shining; whorls 6, very flat, the last broad; sutures incised, narrowly margined above; columella arched above; aperture irregularly subquadrate, armed with a nodulous, parietal lamella, two divergent lamellæ on the columella and a bifurcate lamella on the upper margin of the outer lip; labrum whitish, thickened, scarcely reflexed.

Alt. 3.25, diam. maj. .75 mm.

*Hab.* Gazi, British East Africa (*Robin Kemp*).

ENNEA COPIOSA, sp. n. (Pl. XXXII. figs. 16, 16 a.)

Shell cylindrically ovate, with very obtuse apex, thin, transparent, polished, shining, vitreous, whitish; whorls  $6\frac{1}{2}$ , the first four and a half regularly increasing in length and breadth, the penultimate increasing proportionately in length but not much in breadth, the last whorl increasing in length but considerably diminishing in breadth, marked only on the upper whorls with oblique, transverse striæ, the latter half of the last whorl and the base of the shell being finely costulate, especially round the umbilical area; suture impressed, narrowly margined below and showing occasional traces of nodulous crenellation; umbilical depression ovate, moderately open and deep; columella very

\* Proc. Zool. Soc. London, 1890, p. 581.



slightly, obliquely descending, broadly, outwardly expanded, vitreous, both this and the labrum, which is also rather broadly, outwardly expanded and narrowly reflexed at the edge, showing the white laminiferous, somewhat irregular growth-periods; aperture irregularly subquadrate, armed with an erect sickle-shaped parietal lamella, which starts from the upper margin of the labrum and proceeds downwards in an oblique direction for some distance, when it terminates in a broad, shallow, cup-like projection; two glassy, lamella-like teeth on the inner margin of the labrum, of which the lower is the larger and is much more quadrate than the upper; a small, interiorly situate, basal denticle; a minute, sharp, thorn-like denticle at the base of the columella, and a triangular, trifid, projecting denticle or lamella on the upper portion of the columella.

Alt. 6, diam. maj. 3.25 mm.

Aperture: alt. 1.5, diam. 1 mm.

*Hab.* Uruess, British East Africa (*A. Blayney Percival*).

Var. ROBUSTA, var. n.

Shell differing from the type in its larger and more cylindrical form and in the stronger and more fully developed apertural armature, though the system remains the same.

Alt. 7.75, diam. maj. 3.75 mm.

Aperture: alt. 1.75, diam. 1.25 mm.

*Hab.* Larogi Hills, British East Africa, at an altitude of 6000 to 7000 feet (*A. Blayney Percival*).

ENNEA CURVICOLUMELLA, sp. n. (Pl. XXXII. figs. 17, 17 a.)

Shell small, perforate, shortly cylindrical, smooth, shining, vitreous, creamy white; whorls 6, flattish, the first three rather rapidly increasing, the fourth and fifth gradually so, the sixth rather broad in proportion to the remainder; suture impressed, margined below; umbilicus moderately wide and deep; columella descending in an angular curve and excavated at the angle, where, on the inner margin, is developed a coarse, lamelliform protuberance projecting into the interior of the shell; labrum continuous, somewhat expanded and reflexed, bearing two lamelliform plaits (of which the lower is the larger) on the inner margin of the upper portion, and a coarse, slightly curved, erect, parietal lamella above; aperture rather elongately subquadrate.

Alt. 2.75, diam. maj. 1.25 mm.

*Hab.* Between the Jombene Hills and Nyeri, British East Africa (*Robin Kemp*).

ENNEA DECUSSATULA, sp. n. (Pl. XXXIII. figs. 1, 1 a.)

Shell cylindrically ovate, thin, cream-coloured; whorls 7, the first five regularly increasing, the sixth long in proportion to those above, the seventh also long, but diminishing in breadth and bistrangulate just behind the labrum, sculptured with rather



coarse, oblique, transverse costulae, and minutely, spirally malleated so as to present a slightly decussate appearance; suture incised, strongly crenellated by the terminations of the transverse costulae; umbilical area appearing as a narrow and shallow depression; columella slightly oblique; labrum white, narrowly expanded and reflexed, the margins distant; aperture sub-rhomboidal, armed with a single, erect, nearly vertically descending, parietal lamella, a small denticle and a somewhat weak lamella on the inner side of the outer lip, a well-developed basal denticle at the base, and a broad squarish shelf-like projection on the columella bearing a central depression.

Alt. 11·75, diam. maj. 5·5 mm.

Aperture: alt. 4, diam. 2·5 mm.

*Hab.* Kigezi, extreme S.W. Uganda, at an altitude of 7000 feet (*Robin Kemp*).

ENNEA DISSEMINATA, sp. n. (Pl. XXXIII. figs. 2, 2 *a*.)

Shell small, rather shortly cylindrical, whitish, slightly polished; whorls 7, the third, fourth, and fifth somewhat convex, the sixth and seventh flattish, sculptured, especially on the later whorls, with indistinct, oblique, transverse costulae; suture impressed, rather distantly crenellated by the terminations of the transverse costulae; umbilicus reduced to a mere fissure; columella curved, extending above into a narrow, but thickish, parietal callus; labrum white, narrowly reflexed; aperture subquadrate, armed with a short, erect, parietal lamella, a broad, subbifid, tooth-like projection on the inner margin of the outer lip, a small basal denticle at the foot of the columella, and above this a broad, rounded projection, very interiorly situate.

Alt. 4·25, diam. maj. 2 mm.

Aperture: alt. ·75, diam. ·5 mm.

*Hab.* Near Lake Kivu (type specimen); also between Lake Mutanda and the region between that lake and Lake Kivu (*Robin Kemp*).

ENNEA EUSOENSIS, sp. n. (Pl. XXXIII. figs. 4, 4 *a*.)

Shell ovately cylindrical with obtuse apex, scarcely rimate, moderately solid, shining, dark cream-colour; whorls 6, the first three rapidly, the remainder regularly, increasing, slightly convex, smooth but for lines of growth; suture impressed; columella white, rather broadly, outwardly expanded; labrum white, expanded, slightly reflexed; aperture rather broad and short, armed with a coarse, oblique, parietal lamella situated on the right-hand side, a short, tooth-like lamella on the inner margin of the outer lip and a small lamella situated on the median region of the columella.

Alt. 5·5, diam. maj. 2·5 mm.

Aperture: alt. 1·5, diam. 1·25 mm.

*Hab.* Eusso Nyiro, British East Africa (*Robin Kemp*).

*ENNEA FOVEOLATA*, sp. n. (Pl. XXXIII. figs. 5, 5 a.)

Shell small, cylindrical, cream-coloured, polished; whorls 6, rather flat, plicate at the suture, otherwise smooth with the exception of the latter portion of the last whorl which is plicate throughout, last whorl bearing three hollows or dents just behind the peristome; suture impressed; columella produced internally into a very broad, squarish, shelf-like projection; aperture somewhat square, armed with a small, rounded denticle immediately below the shelf-like columella, a broad projection inside the outer lip, a small denticle above this and a curved, erect, parietal lamella; labrum white, expanded, reflexed.

Alt. 4·25, diam. maj. 1·5 mm.

Aperture: alt. ·75, diam. ·75 (nearly) mm.

*Hab.* Gazi, British East Africa (*Robin Kemp*).

*ENNEA FUNEREA*, sp. n. (Pl. XXXIII. figs. 6, 6 a.)

Shell cylindrical, rather solid, somewhat shining, covered with a dark blackish-brown periostracum; whorls 7, the first rapidly, the last three moderately increasing, flattish, sculptured with regular, very oblique, transverse costulae; suture impressed; columella vertically descending, outwardly broadened and expanded, greyish white; labrum slightly granular, also greyish white and outwardly expanded with reflexed margin; aperture subquadrate, bearing a coarse, erect, parietal lamella, two slightly distant lamellae on the inner margin of the outer lip, of which the lower is the larger, a moderately sized, basal, tooth-like lamella, and a very coarse and blunt, almost bifurcate lamella on the columella.

Alt. 6, diam. maj. 2·75 (nearly) mm.

Aperture: alt. 1·75, diam. ·75 mm.

*Hab.* Chanler Falls, Eusso Nyiro River, British East Africa (*Robin Kemp*).

Var. *LEVIS*, var. n.

Shell differing from the typical form in being almost destitute of the transverse sculpture.

Alt. (of type specimen) 7, diam. maj. 2·75 mm.

Aperture: alt. 2, diam. ·75 mm.

*Hab.* Between the Eusso Nyiro River and Mount Marsabit, British East Africa (*A. Blayney Percival*).

Though the series of the typical form collected by Mr. Kemp at the Chanler Falls scarcely varies in size, the present variety shows enormous differences, as below:—

Largest specimen: alt. 8·5, diam. maj. 3·25; aperture: alt. 2, diam. ·75 mm.

Smallest specimen: alt. 4·75, diam. maj. 2·5; aperture: alt. 1·5, diam. ·75 mm.

*ENNEA HECTOR*, sp. n. (Pl. XXXIII. fig. 7.)

Shell large, ovately cylindrical, rather thin, smooth but for

lines of growth, somewhat shining, creamy white; whorls  $7\frac{1}{2}$ , the first five regularly, the remainder rapidly, increasing, the last contracted below; suture impressed; umbilicus moderately narrow; columella obliquely descending, white, reflexed, diffused above into a lightish callus which joins the upper margin of the labrum; labrum white, sinuous, expanded and reflexed, especially in the basal region; aperture irregularly subquadrate, armed with an erect, somewhat bent, oblique, parietal lamella slightly broadening below, a group of three denticles on the inner margin of the labrum, of which the middle one is the largest and the lowest the smallest, a small, triangular, basal denticle and a strong curved lamelliform projection about halfway up the columella.

Alt. 18.25, diam. maj. 9 mm.

Aperture: alt. 6, diam. 4.25 mm.

*Hab.* Between the Jombene Hills and Nyeri, British East Africa (type) (*Robin Kemp*).

A very handsome species which it would be difficult to confound with any other as yet recorded from the region in which it occurs; specimens were also sparingly found by Mr. Kemp on the Jombene Hills at an altitude of 6000 feet and at Mweru.

\* *ENNEA INGEZIENSIS*, sp. n. (Pl. XXXIII. figs. 9, 9 a.)

Shell small, ovately cylindrical, cream-coloured, somewhat shining; whorls 7, the first five regularly increasing, the last two longer but narrower than the fifth, the last deeply strangulate just behind the labrum, marked with obsolete, oblique, transverse riblets; suture well impressed, *strongly* crenellated by the terminations of the obsolete, transverse riblets; umbilical area presenting a rather deep depression; columella descending in a somewhat angular curve and developed into a broad, shelf-like projection well within; labrum white, expanded and narrowly reflexed, the margins joined by a well-defined, parietal callus; aperture subrectangular, armed with a coarse, erect, somewhat curved, parietal lamella, a large, squarish, tooth-like projection on the labrum corresponding to, and formed by, the deep strangulation on the last whorl, a small, triangular denticle at the base of the columella, above which and very interiorly situate is a broad, shelf-like projection.

Alt. 4.5, diam. maj. 2 mm.

Aperture: alt. 1.25, diam. 1 mm.

*Hab.* Ingezi, Mfumburu Mountains, extreme S.W. Uganda; also from Kigezi in the same region at an altitude of 6000 feet (*Robin Kemp*).

Var. *PUSILLA*, var. n.

Shell much smaller than the typical form, with one whorl less, which gives to it a more cylindrical appearance; the columella also descends more vertically than is the case with the type.

Alt. 3.25 (nearly), diam. maj. 1.5 (nearly) mm.

*Hab.* Between Mbarara and Kigezi, extreme S.W. Uganda (*Robin Kemp*).

## Var. MBARARAENSIS, var. n.

Shell smaller than the typical form and proportionately shorter, with one whorl less, the denticle at the base of the columella is also removed to a position considerably higher up and almost overhanging the internal, shelf-like projection.

Alt. 3·5 (nearly), diam. maj. 1·75 mm.

Aperture: alt. 1 (nearly), diam. ·75 mm.

*Hab.* Between Mbarara and Masaka, extreme S.W. Uganda (*Robin Kemp*).

## ENNEA INSULSA, sp. n. (Pl. XXXIII. figs. 13, 13 a.)

Shell elongately ovate, very minute, cream-coloured; whorls  $4\frac{1}{2}$ , very convex, sculptured with oblique, transverse riblets, the last ascending in front; suture deeply impressed; aperture subquadrate, armed with a parietal lamella bearing a small, internal, erect denticle towards the base of the outer lip and an internal lamella on the columella; labrum white, outwardly expanded, continuous.

Alt. 1·75, diam. maj. ·75 mm.

*Hab.* Gazi, British East Africa (*Robin Kemp*).

## ENNEA INTRADENTATA, sp. n. (Pl. XXXIII. figs. 14, 14 a.)

Shell small, cylindrical, yellowish white; whorls  $6\frac{1}{2}$ , the first two and a half rapidly, the remainder scarcely, increasing, rather flat, smooth; suture impressed; umbilical area forming a shallow depression; columella descending obliquely, notched above, bulging inwardly below; labrum white, sinuous, narrowly reflexed; aperture irregularly, somewhat elongately subquadrate, armed with an almost vertical, parietal lamella, an upwardly directed, tooth-like lamella on the outer lip, below which and very interiorly situate occurs a nodulous lamella, two converging, deeply situate, broad, basal denticles, and two broad lamellæ also very interiorly situate on the columella, of which the uppermost is the stronger.

Alt. 3·5, diam. maj. 1·25 mm.

*Hab.* Jombene Hills, British East Africa, at an altitude of 6000 feet; a single specimen was also taken on the route between the Jombene Hills and Nyeri (*Robin Kemp*).

## ENNEA IRIDESCENS, sp. n. (Pl. XXXIII. figs. 12, 12 a.)

Shell rather elongately cylindrical, thin, semitransparent, whitish, polished, shining, slightly iridescent; whorls 7, the first four regularly increasing, the remainder increasing in length but slightly diminishing in breadth, marked with coarse, oblique growth-lines; suture impressed; umbilical area presenting the appearance of a rather broad and shallow depression; columella almost vertically descending; labrum rather broadly expanded and reflexed; aperture subquadrilateral, armed with a small, rather interiorly situate denticle and a coarse, erect lamella on the parietal wall, a projection on the inner margin of the outer lip, and immediately below this and in the interior of the shell

a stout, squarish denticle, a broad, well-developed, basal denticle well within the aperture, and a bifid lamella on the columella, the upper arm of which is much the coarser.

Alt. 4, diam. maj. 1.5 mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Near Kigezi, extreme S.W. Uganda (*Robin Kemp*).

Var. *CURTA*, var. n.

Shell shorter and proportionately a little broader, with one whorl less; the large, parietal lamella is less strongly developed and the basal denticle more strongly so than in the typical form.

Alt. 3.5 (nearly), diam. maj. 1.5 (nearly) mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Burunga, Mount Mikeno, Belgian Congo, at an altitude of 6000 feet (*Robin Kemp*).

*ENNEA BURUNGAENSIS*, sp. n. (Pl. XXXII. figs. 12, 12 a.)

Shell differing from *E. iridescens* in its shorter, broader, and rather less cylindrical form, in being obsoletely plicate on the upper whorls, and in having the suture strongly crenellate; the aperture is ovate and lacks the small, interiorly situate, parietal denticle of that species, the projection on the inner margin of the outer lip is much more square in shape, stronger and more marked, and the denticle below is, in the present form, developed into a long, curved, erect lamella; moreover there are two large basal denticles, the lower being interiorly situate, instead of the single basal denticle of *E. iridescens*, and the bifid lamella on the columella of that species is replaced by a broad, shelf-like projection.

Alt. 4.25, diam. maj. 1.75 mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Burunga, Mount Mikeno, Belgian Congo, at an altitude of 6000 feet (*Robin Kemp*).

*ENNEA KENIANA* Preston, var. *PARVULA*, var. n.

Smaller than the typical form\* from Mount Kenia.

Alt. 2.5, diam. maj. 1.5 mm.

*Hab.* Between the Jombene Hills and Nyeri, British East Africa (*Robin Kemp*).

Var. *INTERMEDIA*, var. n.

Intermediate between the typical form and var. *parvula*.

Alt. 3 (about), diam. maj. 1.75 mm.

*Hab.* Jombene Hills, British East Africa, at an altitude of 6000 feet (*Robin Kemp*).

Both the above varieties appear to be well-marked local races, the species seeming to become more stunted in the lower country.

\* Ann. Mag. Nat. Hist. vol. vii. 1911, p. 464, pl. xi. fig. 3.



*ENNEA ABERDARENSIS*, sp. n. (Pl. XXXII. figs. 6, 6 a.)

Shell differing from *E. keniana* Preston\* in its more ovate form and much smaller size, in having but 6 whorls, a more curved columella, more regularly rectangular aperture, and proportionately stronger armature, though the arrangement of the apertural lamellæ is quite similar.

Alt. 2.75, diam. maj. 2.75 (nearly) mm.

*Hab.* Mt. Kenangop, Aberdare Range, British East Africa (*Robin Kemp*).

*ENNEA KIGEZIENSIS*, sp. n. (Pl. XXXIV. figs. 2, 2 a.)

Shell small, shortly cylindrical, whitish, somewhat shining; whorls  $6\frac{1}{2}$ , the first four and a half regularly increasing, the last two regularly increasing in length, but very slightly diminishing in breadth, marked with growth-lines, otherwise smooth, except in the subsutural region, where the shell is coarsely plicate; suture well impressed; umbilicus laterally compressed into a fissure; columella somewhat curved, outwardly expanded; labrum white, expanded outwards and reflexed, the margins converging; aperture subquadrilateral, armed with a single, rather coarse, erect and vertical, parietal lamella, a coarse, nodulous denticle on the inner margin of the outer lip, below which and very interiorly situate occurs a broadly triangular lamella, and a broad, interiorly situate projection on the columella ending in three distant, pointed denticles.

Alt. 3 (about), diam. maj. 1.5 mm.

*Hab.* Kigezi, extreme S.W. Uganda (*Robin Kemp*).

*ENNEA LAQUEUS*, sp. n. (Pl. XXXIV. figs. 5, 5 a.)

Shell rather small, ovately cylindrical, solid, whitish; whorls  $6\frac{1}{2}$ , the first two and a half regularly increasing, the third much larger, the antepenultimate proportionately so, the penultimate increasing in length but scarcely in breadth, and the last also increasing in length but diminishing in breadth, the apical whorls faintly and finely, decussately sculptured with transverse and spiral striæ, the remaining whorls sculptured with moderately fine, closely-set, oblique costulæ, which become finer and still more closely set in the strangulated area just behind the labrum, and where also traces of microscopic, spiral striæ are visible; suture well impressed; umbilical area represented by an obliquely elongate depression; columella descending in a curve and bearing, very internally, a broad, sloping, shelf-like projection; labrum white, porcellaneous, continuous, outwardly expanded and reflexed, callously flattened against the parietal wall; aperture irregularly ovate, bearing an erect, parietal lamella, and a projection on the upper portion of the outer lip which bears two small, fine lamellæ above and a coarser one below, the parietal lamellæ fitting between the two former; at the base of the aperture, somewhat

\* Ann. Mag. Nat. Hist. vol. vii. 1911, p. 464, pl. xi. fig. 3.



interiorly situate and a little to one side, appears a moderately small denticle.

Alt. 4 (nearly), diam. maj. 2 mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Jombene Hills, British East Africa, at an altitude of 4000 feet (*A. Blayney Percival*).

A very remarkable species, which, apart from the decussate sculpture of the apical whorls, visible only by the aid of a microscope, is easily separable from hitherto-described species of the group by the interlocking of the parietal lamella with those on the projection situated just within the aperture on the outer lip.

Var. *HERCULES*, var. n.

Differing from the typical form in its much larger size, coarser sculpture, and rather more obtuse apex.

Alt. 6.25, diam. maj. 3 mm.

Aperture: alt. 1.75, diam. 1.25 mm.

*Hab.* Urguess, British East Africa, at an altitude of 6000 feet (*A. Blayney Percival*).

*ENNEA CLAUSTRUM*, sp. n. (Pl. XXXII. figs. 14, 14 a.)

Shell allied to *E. laqueus*, but larger, more cylindrical and less ovate, it has half a whorl more and is more strongly, transversely costulate on all but the apical whorls; the columella descends in a much stronger curve, and instead of the broad, internal, shelf-like projection, which in the present species is reduced to a very slight protuberance, there is, very internally situated, a strong, curved lamella on the outer wall.

Alt. 4.75, diam. maj. 2 mm.

Aperture: alt. .75, diam. .75 mm.

*Hab.* Between the Laikipia Plateau and the Eusso Nyiro River, British East Africa (*A. Blayney Percival*).

*ENNEA LIMA*, sp. n. (Pl. XXXIV. figs. 6-6 b.)

Shell ovately cylindrical, white, somewhat shining; whorls 7, the first very small, somewhat flattened, the second rather large in proportion, the third, fourth, and fifth regularly increasing in length and breadth, the sixth and seventh increasing in length, but diminishing slightly in breadth, the apical whorls smooth, polished, the remainder rather curiously, coarsely, cancellately sculptured with spiral sulci, the interstices being crossed by short, closely-set ridges, which develop on the latter half of the last whorl and on the base of the shell into fine transverse costulae; suture impressed, narrowly margined below with white; umbilical depression wide and moderately deep, finely, transversely costulate; columella white, porcellaneous, broadly and somewhat erectly, outwardly expanded, slightly obliquely descending, diffused into a white, rather coarsely costulate, well-defined, parietal callus which reaches to the upper margin of the

labrum; labrum white, outwardly expanded and reflexed below; aperture subquadrate, armed with a coarse, oblique, parietal lamella, two coarse, broad, projecting denticles on the inner margin of the labrum, of which the lower is the larger, a small, slightly interiorly situate, basal denticle, a minute denticle at the base of the columella, and a broad, bifurcate, projecting lamella on its median part.

Alt. 6.25, diam. maj. 3 mm.

Aperture: alt. 2, diam. 1.25 mm.

*Hab.* Urguess, British East Africa (*A. Blayney Percival*).

*ENNEA MALASANGIENSIS*, sp. n. (Pl. XXXIV. figs. 7, 7 a.)

Shell cylindrical, yellowish white, somewhat polished; whorls 6, the first very small, the second and third proportionately large, regularly increasing, the remainder increasing in length but not in breadth, moderately convex, having a somewhat weathered appearance; suture deeply impressed; umbilicus rather wide, shallow; columella vertically descending, broadly expanded; labrum broadly expanded and reflexed below, continued along the parietal wall; aperture subrectangular, armed with a small, interiorly situate denticle, and a strong, curved, parietal lamella, a broad, squarish projection on the inner margin of the outer lip, an interiorly situate, basal denticle, and a broad, bifurcate projection on the columella, of which the upper bifurcation is the stronger.

Alt. 3.25 (nearly), diam. maj. 1.25 mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Malasangi, S.W. Uganda (*Robin Kemp*).

*ENNEA MASAKAENSIS*, sp. n. (Pl. XXXIV. figs. 9, 9 a.)

Shell small, acuminate ovate, in dead condition yellowish; whorls 6, the first five regularly increasing, the sixth increasing in length but slightly decreasing in breadth, sculptured with somewhat distant, vertical, transverse costulae; suture impressed; umbilicus reduced to a narrow and shallow depression; columella obliquely descending; labrum continuous, rather broadly expanded, reflexed; aperture subquadrate, armed with a parietal lamella and a broad denticle on the inner margin of the outer lip.

Alt. 4, diam. maj. 1.75 mm.

Aperture: alt. .75, diam. .75 mm.

*Hab.* Between Masaka and Entebbe, extreme S.W. Uganda (*Robin Kemp*).

*ENNEA MIKENOENSIS*, sp. n. (Pl. XXXIV. figs. 10, 10 a.)

Shell cylindrically ovate, dark yellowish white; whorls 8, the first six regularly increasing, the last two increasing in length but very slightly decreasing in breadth, sculptured with rather coarse, oblique costulae; suture impressed; umbilicus narrow, deep, rapidly widening below; columella somewhat vertically

descending; labrum continuous, expanded and slightly reflexed, notched on its outer margin; aperture subrectangular, armed with one very small, somewhat interiorly situate, parietal denticle, and one coarse, curved above and straightly descending, parietal lamella, a coarse, bifurcate denticle on the inner margin of the labrum, the upper bifurcation being much smaller than the lower, a very interiorly situate basal tooth and a coarse, squarish lamella-like tooth on the columella.

Alt. 4, diam. maj. 2.25 mm.

Aperture: alt. 1, diam. .75 mm.

*Hab.* Burunga, Mount Mikeno, Belgian Congo, at an altitude of 6000 feet (*Robin Kemp*).

*ENNEA MONTICOLA*, sp. n. (Pl. XXXIV. figs. 12, 12 a.)

Shell allied to *E. commoda* Smith\* from the Mau Escarpment, E. Uganda, but smaller, of a more cylindrical shape, with finer transverse sculpture and having one whorl more; the lamella on the outer lip is also much more strongly bifurcate than in *E. commoda*, and there is, in the present species, no internal basal denticle immediately below it.

Alt. 3.75, diam. maj. 2 mm.

Aperture: alt. .75, diam. .5 mm.

*Hab.* Larogi Hills, British East Africa, at an altitude of 6000–7000 feet (*A. Blayney Percival*).

*ENNEA MWERUENSIS*, sp. n. (Pl. XXXIV. figs. 14, 14 a.)

Shell rimate, ovately cylindrical, shining, whitish; whorls 7 the first four regularly, the remainder rather rapidly increasing, flattish, the last ascending in front, sculptured with indistinct, oblique, transverse striae, which are more apparent in the sub-sutural region and become very marked on the base of the shell; suture impressed, scarcely crenellate; umbilicus reduced to a narrow fissure; columella obliquely descending, bulging inwardly and slightly, erectly, outwardly reflexed; labrum reflexed, expanded, especially on the side opposite to the columella; aperture almost irregularly triangular with rounded base, armed with an erect, oblique, parietal lamella, a projecting, lamelliform denticle on the inner margin of the outer lip and two denticles, one situate at the base of, and the other about halfway up, the columella.

Alt. 7, diam. maj. 3.5 mm.

Aperture: alt. 2.5, diam. 2 mm.

*Hab.* Mweru, British East Africa (type): also found on the Jombene Hills at an altitude of 6000 feet (*Robin Kemp*).

It may be well here to point out that the village of Mweru above mentioned should not be confounded with the well-known Lake of the same name situated far to the south on the borders of the Congo State and Northern Rhodesia.

\* J. Conch., Leeds, x, p. 315, pl. iv. fig. 9.